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This is a good time to visit the Arboretum. The unusually mild winter and the abundant summer and autumn rains have been favorable to most plants, and probably the Arboretum has never looked better at this season of the year than it does this week. Conifers, particularly Junipers, have not before been in better condition, and the fresh green of the leaves on many trees and shrubs is unusual here the middle of October and heightens the beauty of the autumn colors of the leaves of those plants which change color early under all conditions.

Autumn Colors. There can be few places in the world where colors of ripening leaves are so varied or are continued through so many weeks. For the leaves of the plants of eastern Asia, which are well represented in the Arboretum, usually are beautifully colored after those of our eastern American trees, with the exception of the Oaks, have fallen. A few conspicuous exceptions to this general rule are worth noting:— Nearly three weeks ago and before the leaves of the Red Maple (*Acer rubrum*) had begun to change color, those of the Cork-barked tree of eastern Siberia (*Phellodendron amurense*) were bright gold color, making the two trees on the right-hand side of the Meadow Road the most brilliant objects in the Arboretum. These trees have now been bare of leaves for several days. They are still interesting objects, however, for now that the leaves have gone it is possible to see clearly the pale, deeply furrowed soft corky bark of the trunk and large branches to which this tree owes its name. The genus *Phellodendron* is confined to eastern Asia, and the five species now known are well established in the Arboretum. On account of this

bark *Phellodendron amurense*, the type of the genus, is perhaps the most interesting species. The others, however, are larger and more shapely trees, and the species of northern Japan and Saghalien (*P. sachalinense*) is well suited for street planting. The pungent oil which abounds in the leaves of these trees protects them from the attacks of leaf-eating insects. Another conspicuous exception to the rule that the leaves of Asiatic plants change color later in the autumn than those of eastern American plants is found in the Burning Bush with winged branches, *Evonymus alatus*, a native of Japan and Korea. The flowers and fruits of this plant are small and inconspicuous, but few plants surpass it in the beauty of its rose-colored autumn foliage which is unlike that of any other plant in the Arboretum. This plant, if it gets the opportunity, will spread into a shrub from ten to fifteen feet across with lower branches laying close to the ground, and will form a compact round-topped head. It is a plant, however, which unless it can have plenty of room in which to grow is not worth a place in the garden. *Acer ginnala* is another Asiatic plant which takes on its autumn colors early. This small Maple, which is a native of eastern Siberia, Manchuria, and Korea, is not surpassed in autumn brilliancy by any American Scarlet Maple. One of the early introductions of the Arboretum it has been taken up by some American nurserymen and is now sometimes found in northern gardens. A blue and a brown dye are obtained from the leaves, which are shipped in quantity from Korea into China. As this little Maple is very hardy, and grows rapidly and produces large crops of seeds it might have been advantageously planted commercially in the northern states had not vegetable dyes been so generally superseded by synthetic dyes, a product of coal tar; and it is probable that these Maple leaves may not be much longer used in China, which is already receiving considerable quantities of blue dye manufactured in the United States. Another Korean and Manchurian Maple, *Acer mandshuricum*, also illustrates the fact that the leaves of some Asiatic trees turn color and fall early in the season. This is one of the group of Maples with leaves composed of three leaflets and one of the largest and handsomest trees of Manchuria and northern Korea. Like those of a few other plants, notably the Japanese *Acer nikoense*, the leaflets of this Maple retain in autumn the pale color of their lower surface which increases the beauty of the bright red upper surface. Seedlings of this Maple have grown rapidly in the Arboretum and have flowered and produced infertile seeds for the last two or three years. The plants are hardy; some of them, however, have died, and the fact that small individuals only a few years old have flowered indicates that there is something in the climate or soil of Massachusetts which does not suit them. This is unfortunate for *Acer mandshuricum*, from which much has been expected here, is a tree of great beauty and interest. Little attention has been given by park- and garden-makers to the selection and arrangement of plants to produce brilliant and harmonious autumn effects of autumn colors, with the result that there is less beauty at this season of the year in planted grounds than it is possible to obtain. Trees and shrubs grouped to produce the best autumn color effect would compose well at other seasons of the year. The success of such an arrangement of plants

depends on knowledge which can only be obtained by the constant study at all seasons of the year of living plants. Opportunity for such study is found in the Arboretum, in which nearly every tree and shrub which can grow in the northern United States is established. The leaves on some individuals of a species turn more brilliantly than on other individuals of the same species and this individual character is constant from year to year. It is therefore possible to increase the number of trees with exceptionally handsome autumn foliage by grafting or budding, grafts or buds being taken from selected trees worked on stock of the same species, as trees with pyramidal or pendulous branches are propagated. The value of propagating trees for the autumn color of their leaves is shown by the Red Maple-tree which stands on the left-hand side of the Meadow Road directly opposite the entrance to the Administration Building. This tree was obtained by grafting a Red Maple seedling with a branch of a tree growing in Brookline with crimson autumn foliage. The leaves of the grafted tree have the same color as those of the Brookline tree, and for more than two weeks this tree has been the brilliant object of the Arboretum. Near it are standing two seedling Red Maples. The leaves of one of these trees turned pale yellow and are fast falling; from the other the nearly green leaves have already fallen.

Plants for the Edge of Beds of Large Shrubs. A correspondent of the Arboretum writes: "Can you recommend several shrubs suitable for edging planting before taller shrubs? I have used *Xanthorrhiza* considerably, but it is almost the only shrub that I find low enough for that purpose. I want to bring some Cornels down to the edge of a drive and I also want to plant in front of Privets and Thorns." There are not many shrubs with deciduous leaves which can be successfully used for this purpose. The best which has been tried in the Arboretum is the Fragrant Sumach (*Rhus canadensis*, or as it was formerly called *Rhus aromatica*). This widely distributed North American shrub rarely grows more than five feet tall, and when planted in good soil is often broader than tall with lower branches spreading flat on the ground, and upper branches erect spreading or drooping. In early spring before the leaves appear the branches are covered with clusters of small bright yellow flowers which in June are followed by dull red fruits which are pretty much hidden by the small compound leaves. Among the small shrubs in the Arboretum few are more brilliant at this season of the year for the leaves turn gradually to bright scarlet and orange. This *Rhus* has been largely planted along some of the drives and this week it is a conspicuous feature of the Arboretum. The *Xanthorrhiza* has also been largely and successfully used here. It makes a neat border plant, and it is also well suited to grow under tall shrubs or trees. The *Xanthorrhiza* spreads rapidly by underground stems which do not grow more than from twelve to eighteen inches high; the small purple flowers which are arranged in drooping clusters, appear as the leaves unfold; these are pinnate, of a cheerful green color and in the autumn turn pale yellow. Some of the North American Roses might be used to edge beds of larger shrubs although most of them are too upright in habit to be really useful for this purpose. There is a dwarf form of the Choke-berry (*Aronia nigra*) in the Arboretum collection which might be used to advantage for this



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